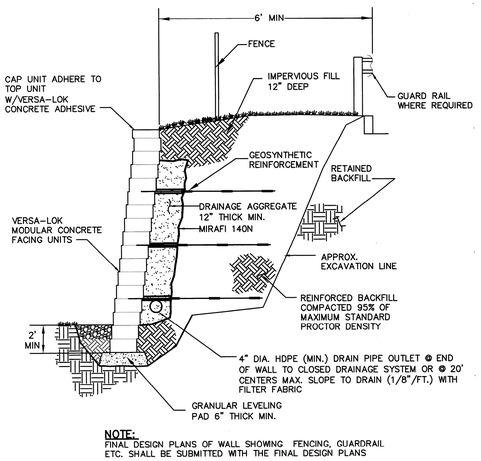
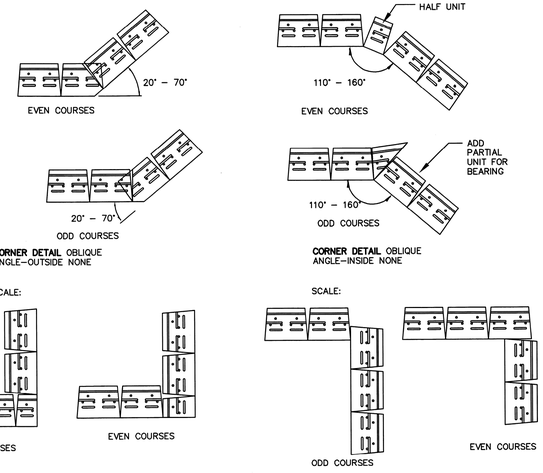


NOTE:
FINAL DESIGN PLANS OF WALL SHOWING FENCING, GUARDRAIL ETC. SHALL BE SUBMITTED WITH THE FINAL DESIGN PLANS

TYPICAL SECTION REINFORCED RETAINING WALL

NOT TO SCALE

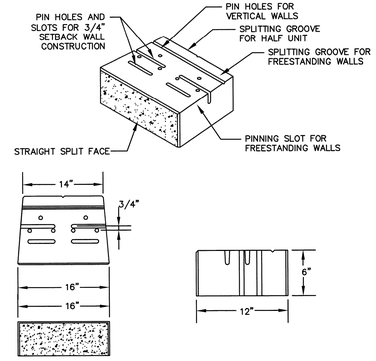


CORNER DETAIL 90° – OUTSIDE

NOT TO SCALE

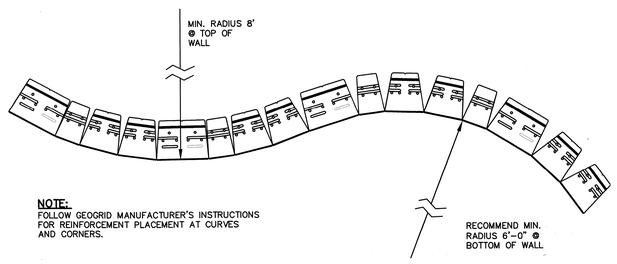
CORNER DETAIL 90° – INSIDE

NOT TO SCALE



VERSA-LOK UNIT (OR APPROVED EQUAL)

NOT TO SCALE



NOTE:
FOLLOW GEOGRID MANUFACTURER'S INSTRUCTIONS FOR REINFORCEMENT PLACEMENT AT CURVES AND CORNERS.

NOTES:
1. FOLLOW GOEGRID MANUFACTURER'S INSTRUCTIONS FOR REINFORCEMENT PLACEMENT AT CURVES AND CORNERS.
2. DO NOT PLACE OVERLAPPING GEOSYNTHETIC LAYERS DIRECTLY ON TOP OF EACH OTHER.
3. PROVIDE 3" (MIN.) OF SOIL BETWEEN OVERLAPPING LAYERS.

CURVE DETAIL

NOT TO SCALE

DRAINAGE FILL

DRAINAGE FILL SHALL BE CLEAN 1 INCH MINUS CRUSHED STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
1 INCH	75–100
3/4 INCH	50–75
No. 4	0–60
No. 40	0–50
No. 200	0–5

MINIMUM PARAMETERS

SOIL	SOIL UNIT WEIGHT	Φ
FOUNDATION SOIL	130	32°

APPLIED SURCHARGE LOADING = 0.47 TIMES THE VERTICAL SURCHARGE LOAD UNIFORMLY DISTRIBUTED OVER THE HEIGHT OF THE WALL
STATIC ACTIVE LATERAL EARTH PRESSURE=59 PSF/FT
GLOBAL STABILITY F.S. = 1.3
OVERTURNING F.S. = 2.0
SLIDING F.S. = 1.5
GEOGRID PULLOUT F.S.=1.5
NET ALLOWABLE SOIL BEARING PRESSURE: 1 KSF

MANUFACTURER'S DESIGN:
1. CONCRETE UNIT RETAINING WALL SHALL BE BY VERSA-LOK OR APPROVED EQUAL
2. DESIGN SHALL BE FROM THE WALL MANUFACTURER AND SHALL INCLUDE A GLOBAL STABILITY ANALYSIS.
3. MANUFACTURER DESIGN ENGINEER SHALL BE LICENSED IN THE STATE OF NEW HAMPSHIRE.
4. DESIGN CALCULATIONS AND PLANS SHALL BE SUBMITTED TO
5. THE WALL DESIGN ENGINEER SHALL COMPLETE SUFFICIENT INSPECTIONS DURING CONSTRUCTION TO CERTIFY WORK IS COMPLETE IN ACCORDANCE WITH DESIGN.
6. SUBMIT AS-BUILT DRAWINGS OF WALL WITH WALL DESIGNER'S CERTIFICATION TO OWNER.

LEVELING PAD

LEVELING PAD MATERIAL SHALL CONSIST OF HARD DURABLE PARTICLES OR FRAGMENTS OF STONE OR GRAVEL. FINE PARTICLES SHALL CONSIST OF NATURAL OR PROCESSED SAND. THE MATERIAL SHALL MEET THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
3 INCH	100
1 INCH	55–85
No. 4	27–52
No. 200*	0–12

* FRACTION PASSING THE No. 4 SIEVE

REINFORCED BACKFILL

IMPORTED REINFORCED BACKFILL MATERIAL SHALL BE CLEAN, FREE-DRAINING WELL GRADED GRANULAR SOIL WITH A MAXIMUM PARTICLE SIZE OF 4" AND NOT MORE THAN 12% BY WEIGHT PASSING THE #200 SIEVE.

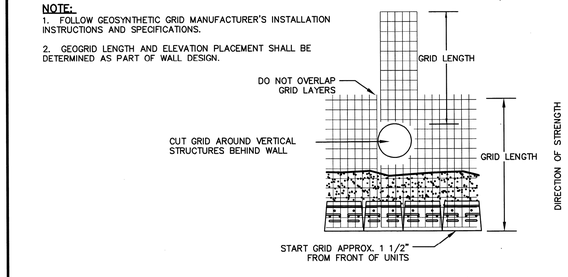
ON-SITE MATERIAL SHALL NOT BE USED FOR REINFORCED BACKFILL MATERIAL, UNLESS IT MEETS THE ABOVE NOTED REQUIREMENTS.

DRAINAGE NOTES:

1. CONTRACTOR SHALL DIRECT SURFACE RUNOFF AWAY FROM THE WALL DURING CONSTRUCTION.
2. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT OR OTHER SURFACE TREATMENT SHALL BE INSTALLED IN THE AREA OF THE WALL IMMEDIATELY AFTER THE WALL IS COMPLETE. OR OTHER MEASURES SHALL BE TAKE TO PROTECT THE WALL FROM RUNOFF.

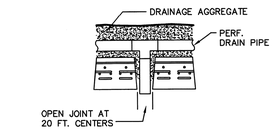
GENERAL NOTES:

1. ALL INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION "DESIGN & INSTALLATION GUIDELINES", BY VERSA-LOK. WHERE INFORMATION ON THESE PLANS CONFLICTS WITH THE GUIDELINES, THE PLANS SHALL SUPERSEDE.
2. STRIP ORGANIC SOILS FROM THE WALL AND GRID ALIGNMENT AREA.
3. BENCH CUT ALL EXCAVATED SLOPES.
4. DO NOT OVER EXCAVATE UNLESS DIRECTED TO DO SO BY THE GEOTECHNICAL ENGINEER.
5. GEOTECHNICAL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
6. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE INDICATED ON THE WALL DESIGN DRAWINGS.
7. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE (SEE SPECIFICATIONS).
8. WHERE PERFORATED DRAINS ARE USED, PROVIDE OUTLETS AT THE ENDS OF THE WALL TO CLOSED DRAINAGE SYSTEM OR AT 20' INTERVALS, SEE DETAILS.
9. BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL IN 12 INCH MAXIMUM LIFTS AS THE WALL IS INSTALLED.
10. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. EACH LIFT SHALL BE TESTED AT INTERVALS NOT EXCEEDING 100 FEET OF WALL LENGTH.
11. COMPACTION SHALL BE TO 95% OF MAXIMUM MODIFIED PROCTOR DENSITY OF THE FILL MATERIAL (ASTM D-1557).
12. PULL GEOGRID TIGHT PRIOR TO BACKFILLING.
13. SEE PROFILE FOR FINISH GRADE AT TOP AND ENDS OF WALL.
14. SEE PROFILE FOR WALL LAYOUT INFORMATION.
15. COMPACTION OF AREAS LOCATED WITHIN 15 FEET OF THE TOP OF THE WALL SHALL BE PERFORMED WITH NON-VIBRATORY ROLLING EQUIPMENT. PLATE VIBRATORY TAMPERS SHALL BE USED IN AREAS WITHIN 5 FEET OF THE WALL.
16. GEOGRID CUT LENGTHS ARE MEASURED FROM THE FACE OF THE RETAINING WALL.
17. GEOSYNTHETIC SHALL BE PLACED WITH STRONGER DIRECTION PERPENDICULAR TO WALL FACE.
18. WHERE GUARDRAIL OR FENCE POSTS ARE INSTALLED SUCH THAT THEY WILL PENETRATE A GEOGRID LAYER, THE GEOGRID SHALL BE PRE-CUT AND SLEEVED SO AS NOT TO DISTURB THE GEOGRID WITH THE INSERTION OF THE POST. THE POST SHALL NOT BE FORCED THROUGH ANY LAYER OF GEOGRID. FORCING A POST THROUGH A GEOGRID LAYER WOULD COMPROMISE THE STRUCTURAL INTEGRITY OF THE GEOGRID AND, HENCE, THE RETAINING WALL SYSTEM.
19. ANY PLANTINGS SET BEHIND THE WALLS SHALL BE PLACED WITHOUT CUTTING OF THE GEOGRID REINFORCING LAYERS. THIS CAN BE ACCOMPLISHED BY SETTING PLANTINGS ABOVE THE GEOGRID LAYERS OR BEYOND THE LIMITS OF THE GEOGRID LAYERS.
20. INSTALLATION OF A VERTICAL SEGMENTAL RETAINING WALL REQUIRES THAT EXTRA ATTENTION BE GIVEN TO LEVELING OF THE BLOCK, AT ALL ELEVATIONS AND IN ALL DIRECTIONS.
21. IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.
22. WALL DESIGNS SHALL CONSIDER EFFECTS OF SLOPE, TRAFFIC LOADS, AND/OR BUILDING LOADS AS REQUIRED.
23. ALL WALLS 4' OR GREATER REQUIRE INSTALLATION OF A SAFETY RAIL.



GEOGRID AT STRUCTURES BEHIND WALL

NOT TO SCALE



DRAIN DETAIL

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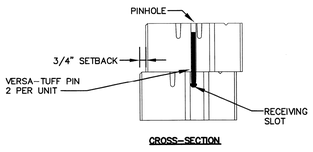

CROSS-SECTION

PINNING DETAIL

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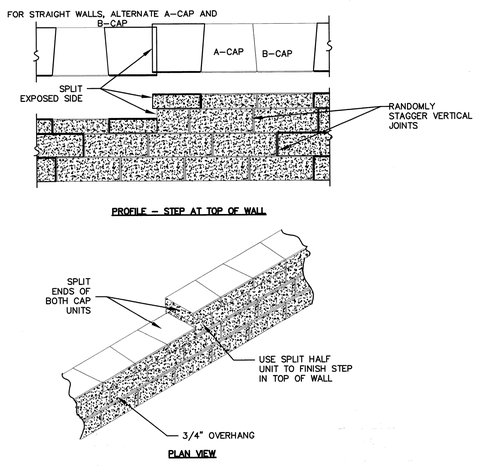
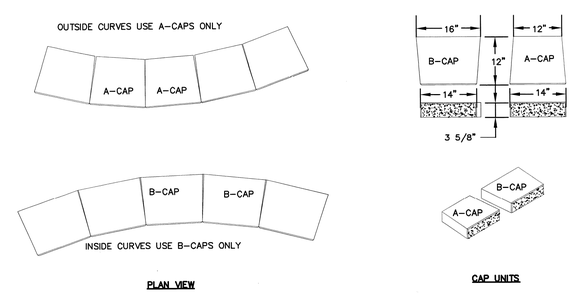


PROFILE – STEP AT TOP OF WALL

PLAN VIEW



PLAN VIEW

CAP UNITS

GENERAL NOTES FOR CAPPING:
1. CAPS SHALL BE ADHERED TO WALL USING VERSA-LOK CONCRETE ADHESIVE
2. CAPS MAY BE PLACED WITH A 1/2" TO 3/4" OVERHANG OF TOP COURSE
3. WHEN SPLITTING CAP UNIT FOR WALL END DO NOT USE A CAP SECTION LESS THAN 6" WIDE
4. DO NOT OVERHANG CAP AT END OF COURSE MORE THAN 1".

CAPPING DETAIL

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Mark	Date	Description
E	6/11/13	ISSUED FOR BUILDING PERMIT
D	12/10/12	REVISED FOR AoT SUBMISSION
C	11/1/12	REVISED FOR PB SUBMISSION
B	9/26/12	REVISED FOR PB SUBMISSION
A	8/22/12	PB SUBMISSION

PROJECT NO:	P0637
FILE:	P0637_DETAILS.dwg
DRAWN BY:	KAM/SLK1
CHECKED:	JMP2
APPROVED BY:	GMM

DETAILS SHEET

SCALE: AS SHOWN

SHEET 22